

1. An airbag assembly comprising:
- a glove box;
  - a knee airbag;
  - a housing encasing the knee airbag, the housing being positioned proximate the glove box; and
  - a front member that covers the glove box and the housing.
2. An airbag assembly as in claim 1 wherein the front member comprises a glove box door and an airbag door.
3. An airbag assembly as in claim 1 wherein the front member comprises a glove box door that covers both the glove box and the housing.
4. An airbag assembly as in claim 1 wherein the assembly further comprises a hinge.
5. An airbag assembly as in claim 4 wherein the hinge may be positioned on a vehicle's instrument panel below a bottom edge of the housing.
6. An airbag assembly as in claim 4 wherein the hinge is attached to a top edge of the housing.

7. An airbag assembly as in claim 1 wherein the front member comprises a tear seam.

5 8. An airbag assembly as in claim 1 further comprising a latch mechanism that is attached to the front member.

9. An airbag assembly as in claim 1 wherein the housing is integral with the glove box.

10 10. An airbag assembly as in claim 1 wherein the assembly is constructed such that the knee airbag will deploy substantially upward when installed onto a vehicle.

11. An airbag assembly as in claim 1 wherein the assembly is constructed such that the housing does not move when the glove box is opened.

12. An airbag assembly as in claim 1 wherein the assembly is constructed such that the housing will move when the glove box door is opened.

13. An airbag assembly as in claim 1 wherein the glove box is attachable to a vehicle's instrument panel via one or more U-brackets.

14. An airbag assembly as in claim 1 further comprising an inflator for  
deploying the knee airbag into an inflated configuration.

5 15. An airbag assembly as in claim 1 further comprising a mounting bracket  
attached to the housing.

16. An airbag assembly as in claim 1 wherein the assembly further comprises  
a middle panel positioned behind the front member.

10 17. An airbag assembly as in claim 16 wherein the middle panel includes one  
or more ribs.

18. An airbag assembly as in claim 16 wherein the middle panel has an  
15 aperture positioned in front of the housing.

19. An airbag assembly as in claim 16 wherein the middle panel is held  
between the glove box and the front member via one or more extending tabs.

20 20. An airbag assembly as in claim 19 wherein the extending tabs pass  
through one or more slots in the middle panel.

21. An airbag assembly as in claim 16 wherein the middle panel is held between the housing and the front member via one or more extending tabs.

5 22. An airbag assembly as in claim 21 wherein the extending tabs pass through one or more slots in the middle panel.

23. An airbag assembly as in claim 1 wherein the front member comprises a glove box door and an aperture.

10 24. An airbag assembly as in claim 23 further comprising a cover sized and configured to cover the aperture.

15 25. An airbag assembly as in claim 24 wherein the cover includes one or more flanges.

26. An airbag assembly as in claim 25 wherein the flanges engage holes in the front member and openings in the housing.

20 27. An airbag assembly as in claim 25 wherein the flanges engage one or more engaging tanges that are positioned on the housing.

28. An airbag assembly as in claim 25 wherein the cover includes a tear seam that is positioned on the flanges.

5 29. An airbag assembly as in claim 24 wherein the cover includes a tear seam that is positioned on a front panel of the cover.

30. An airbag assembly as in claim 1 wherein the airbag assembly is constructed such that during a crash, the airbag will deploy into an inflated configuration regardless of whether a glove box door is in an open position or a closed position.

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31. An airbag assembly as in claim 30 wherein the deployment of the airbag into an inflated configuration moves the glove box door into a closed position.

32. An airbag assembly comprising:  
a glove box;  
a knee airbag;  
a housing encasing the knee airbag, wherein the entirety of the housing is  
5 positioned below the entirety of the glove box; and  
a front member that covers the glove box and the housing.

33. An airbag assembly as in claim 32 wherein the front member comprises a  
glove box door and an airbag door.  
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34. An airbag assembly as in claim 32 wherein the front member comprises a  
glove box door that covers both the glove box and the housing.

35. An airbag assembly as in claim 32 further comprising a hinge that is  
15 attached to a top edge of the housing.

36. An airbag assembly as in claim 32 further comprising a hinge that is  
positioned on a vehicle's instrument panel below a bottom edge of the housing.

37. An airbag assembly as in claim 32 wherein the front member comprises a  
20 tear seam.

38. An airbag assembly as in claim 32 wherein the housing is integral with the glove box.

5 39. An airbag assembly as in claim 32 wherein the assembly further comprises a middle panel that is positioned behind the front member and in front of the housing and the glove box.

10 40. An airbag assembly as in claim 39 wherein the middle panel includes one or more ribs.

41. An airbag assembly as in claim 39 wherein the middle panel has an aperture positioned in front of the housing.

15 42. An airbag assembly as in claim 39 wherein the middle panel is held between the glove box and the front member via one or more extending tabs.

20 43. An airbag assembly as in claim 39 wherein the middle panel is held between the housing and the front member via one or more extending tabs.

44. An airbag assembly as in claim 32 wherein the front member comprises a glove box door and an aperture.

5 45. An airbag assembly as in claim 44 further comprising a cover sized and configured to cover the aperture.

46. An airbag assembly as in claim 45 wherein the cover includes one or more flanges.

10 47. An airbag assembly as in claim 46 wherein the flanges engage one or more engaging tanges positioned on the housing.

48. An airbag assembly as in claim 45 wherein the cover includes a tear seam.

15 49. An airbag assembly as in claim 32 wherein the airbag assembly is constructed such that during a crash, the airbag will deploy into an inflated configuration regardless of whether a glove box door is in an open position or a closed position.

20 50. An airbag assembly as in claim 49 wherein the deployment of the airbag into an inflated configuration moves the glove box door into a closed position.



51. An airbag assembly comprising:
- a glove box;
  - a knee airbag;
  - a housing encasing the knee airbag, the housing being positioned below the glove
- 5 box;
- a front member that covers the glove box and the housing;
  - an inflator in fluid communication with the knee airbag; and
  - a middle panel positioned inside the front member.
- 10 52. An airbag assembly as in claim 51 wherein the middle panel includes one or more ribs.
53. An airbag assembly as in claim 51 wherein the middle panel has an
- 15 aperture positioned adjacent to the housing.
54. An airbag assembly as in claim 51 wherein the middle panel is held
- between the glove box and the front member via one or more extending tabs.
55. An airbag assembly as in claim 51 wherein the middle panel is held
- 20 between the housing and the front member via one or more extending tabs.

56. An airbag assembly as in claim 51 wherein the front member comprises a glove box door and an airbag door.

5 57. An airbag assembly as in claim 51 wherein the front member comprises a tear seam.

58. An airbag assembly as in claim 51 wherein the housing is integral with the glove box.

10 59. An airbag assembly as in claim 51 wherein the airbag assembly is constructed such that during a crash, the airbag will deploy into an inflated configuration regardless of whether a glove box door is in an open position or a closed position.

15 60. An airbag assembly as in claim 59 wherein the deployment of the airbag into an inflated configuration moves the glove box door into a closed position.

- 5 61. An airbag assembly comprising:  
a glove box;  
a knee airbag;  
a housing that encases the knee airbag, the housing being positioned below the  
glove box; and  
a front member comprising a glove box door and aperture, the glove box door  
being positioned in front of the glove box and the aperture being positioned in front of the  
housing; and  
a cover positioned over the aperture, the cover being attached to the housing.
- 10 62. An airbag assembly as in claim 61 wherein the cover includes one or more  
flanges.
- 15 63. An airbag assembly as in claim 62 wherein the flanges are designed to  
engage holes in the front member and openings in the housing.
- 20 64. An airbag assembly as in claim 62 wherein the flanges engage one or more  
engaging tanges positioned on the housing.
65. An airbag assembly as in claim 62 wherein the cover includes a tear seam  
positioned on the flanges.

66. An airbag assembly as in claim 61 wherein the cover includes a tear seam positioned on a front panel of the cover.

5 67. An airbag assembly as in claim 61 wherein the airbag assembly is constructed such that during a crash, the airbag will deploy into an inflated configuration regardless of whether a glove box door is in an open position or a closed position.

10 68. An airbag assembly as in claim 67 wherein the deployment of the airbag into an inflated configuration moves the glove box door into a closed position.

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